

Special Issue

Myoblast and Muscle Cell Genesis and Regeneration

Message from the Guest Editors

Muscle development is a multistep process that involves the commitment of muscle precursor cells to the myoblast lineage, myoblast proliferation, migration and fusion, followed by terminal differentiation and the formation of multinucleated myotubes. Adult muscle repair depends on the population of resident, dormant stem cells termed satellite cells, which are activated during inflammatory response in damaged muscle. Proper muscle cell development requires hormonal stimulation, cell–cell and cell–extracellular matrix communication, as well as cytoskeleton and membrane reorganization. The purpose of this Special Issue is to highlight the molecular background of cellular processes which are critical for proper myogenesis and play a potential role in muscle hypertrophy and dystrophy. **Keywords:** myoblasts; myokines; myogenic regulatory factors; fusion; microRNA; muscle regeneration; myogenesis; satellite cells; hypertrophy; dystrophy

Guest Editors

Dr. Katarzyna Grzelkowska-Kowalczyk

Department of Physiological Sciences, Institute of Veterinary Medicine, Warsaw University of Life Sciences (SGGW), Nowoursynowska 159, 02-776 Warsaw, Poland

Prof. Dr. Piotr Ostaszewski

Department of Physiological Sciences, Institute of Veterinary Medicine, Warsaw University of Life Sciences (SGGW), Nowoursynowska 159, 02-776 Warsaw, Poland

Deadline for manuscript submissions

closed (15 November 2022)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/106535

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
ijms@mdpi.com

[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)





International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)



About the Journal

Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, and molecular biophysics. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)